Seminar on Utility Finance

Session 2: Financing the Rate Base

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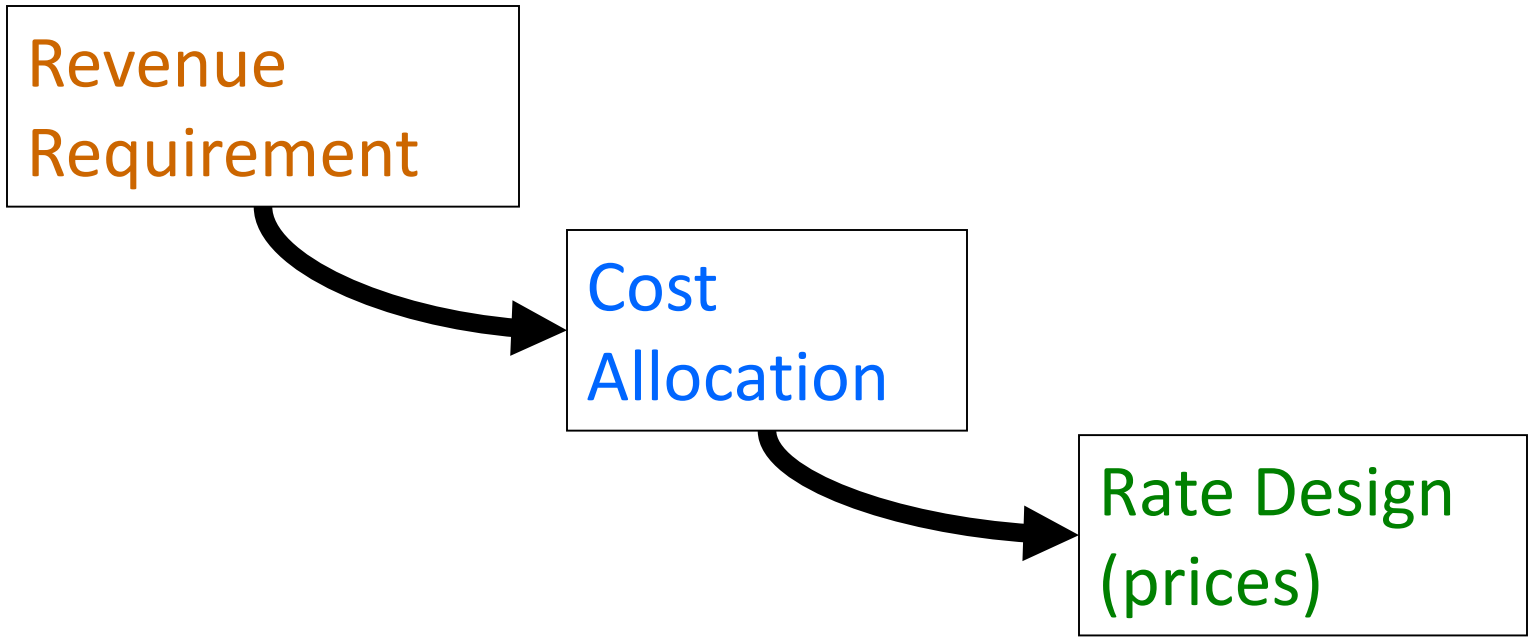
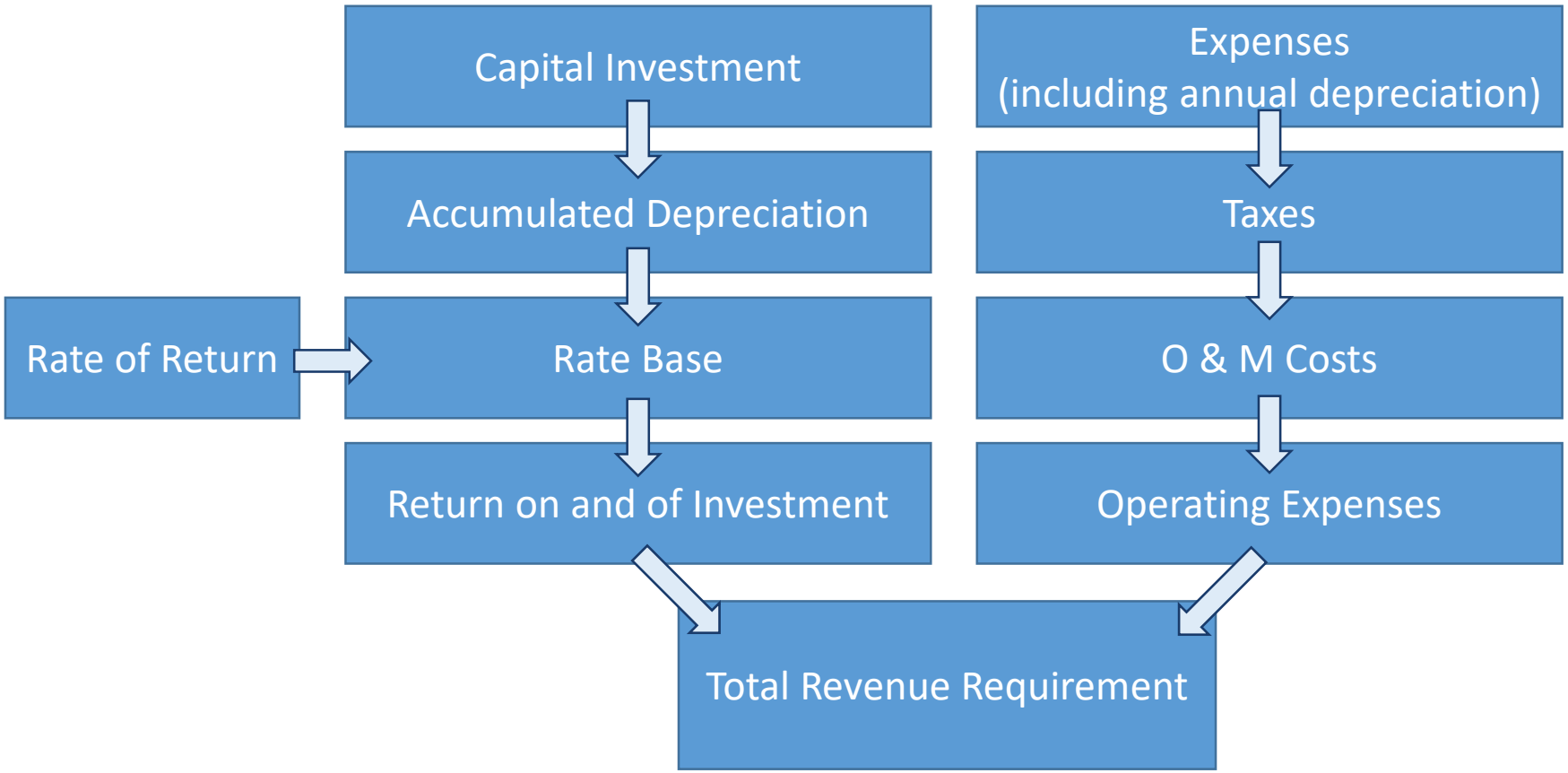
The Traditional Ratemaking Process



The utility revenue requirement



The rate base includes…

- **Electric utilities (vertically integrated)**: generation, transmission & distribution
- **Electric utilities (restructured)**: transmission and distribution
- **Gas utilities**: pipes and mains
- **Water utilities**: distribution pipes, water treatment plants, meters, and hydrants

Rate Base

- The level of investment on which utilities are entitled the opportunity to earn a fair rate of return
- For rate-making purposes, the rate base measures the total value of a utility's property – plant and equipment, materials and supplies, and cash working capital
- Three issues
  - Components
  - Timing of recovery
  - Value

Depreciation

- Depreciation results from loss in service life attributable to obsolescence and wear and tear
- Allows a utility to recover through revenues costs invested in physical plant that contribute to the production of these revenues
- Annual depreciation is a function of three factors
  - The original cost of property, plus the cost of removal, less estimated salvage value
  - The estimated service life over which the value of property is written off, and
  - The method used in distributing value over this life (e.g., straight-line)

Two ways that investments are added to the rate base

Prudence test – was the decision to pursue the investment reasonable given the facts that were known and knowable at the time?

Used and useful – an asset has to be operational to be added to rate base

Sources of Funds for rate base investment

Debt –

funds loaned to the utility corporation for a fixed period at a specified interest rate

Payment of debt is prioritized over equity

Equity –

funds raised by ownership through stocks

preferred or common

equity – higher risk than debt

Allowed vs. Earned ROR

- Allowed return – level used to establish rates.
- Earned return – actual revenues minus expenses, expressed as a percentage of rate base.

Tax Treatment Differs by Source of Funds

- Debt – the cost of debt is deducted as a business expense
- Equity – equity is income, and therefore is taxed
  - The revenue requirement for equity is “grossed up” by the tax rate

Capital Structure

- Proportions of debt and equity that support the company's investment
- Capital structure should reflect a company's financing costs and minimize cost to ratepayers

Weighted Average Cost of Capital

Class of Capital	Percent of Total	Cost Rate	Weighted Cost Rate
LT Debt	55%	6%	3.3%
Equity	45%	10%	4.5%
Weighted Average Cost of Capital			7.8%

Note: This simple capital structure excludes both preferred equity and short-term debt, both of which may be included in actual capital structures.

The right to earn a return

- Under rate-of-return (ROR) regulation, regulators allow utilities to recover sufficient revenue to
  - Cover the cost of borrowed funds, and
  - Have an opportunity to earn a fair or reasonable rate of return for the common/preferred shareholder
- When earning a return may be inappropriate
  - Minimizing customer costs/preserving utility financial health
  - Hurricane recovery
  - Toxic waste cleanup (e.g. ash ponds)
  - Obsolescent assets

Securitization is a form of non-rate base financing

- Creates a stand alone “Special Purpose Entity”
  - Ring-fenced and bankruptcy remote from parent utility
  - Credit evaluated separately from utility
  - Bonds are non-recourse to the utility
- Creates a new asset supported by special state legislation
  - Implemented through a special non-bi-passable wires charge
  - Charge automatically adjusted based on forecasted consumption to produce enough cash to pay debt on-time
- Substantially reduces customer costs by improving debt quality
- No return on the cost of the asset
- Secured by and payable from a dedicated component of the retail rate
  - Not more than 20% of the total bundled rate

Examples of securitization

- West Virginia 2007 –
  - $459 million for Environmental upgrades to coal plant
  - $130 Million Net Present Value Savings

- Florida 2016
  - $1.294 billion early retirement of nuclear power plants
  - Over $ 600 million NPV of savings